**K-5 Math Lesson Plan**

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| **Teacher: Childress, Gilbert, Wall** | | | **Grade: 5** | | | **Date(s)**: Unit 2 Day 12 |
| **Unit Title: Unit 2: Operations with Whole Numbers and Decimals** | | | | **Corresponding Unit Task: Task 4** | | |
| **Essential Question(s): How do I use multiplication strategies to solve problems with large quantities? How can I use division procedures to help me to solve problems with large quantities? Why is it important to determine the unit rate when purchasing items?** | | | | | | |
| **Materials/Resources** | | | | **Essential Vocabulary** | | |
| **Teacher: calculator, index cards, attached equations** | | **Student: calculator, text books, pencils, Inverse activity** | | | **Quotient, multiplication, product, dividend, divisor, equation, inverse** | |
| **Learning Experience** | | | | | | |
| **8 Mathematical Practices:**  1. Make sense of problems and persevere in solving them.  2. Reason abstractly and quantitatively.  3. Construct viable arguments and critique the reasoning of others.  4. Model with mathematics.  5. Use appropriate tools strategically.  6. Attend to precision.  7. Look for and make use of structure.  8. Look for and express regularity in repeated reasoning. | **Common Core State Standards:**  **5.NBT.6 Number and Operations in Base Ten**  **Find** whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. **Illustrate** and **explain** the calculation by using equations, rectangular arrays, and/or area models. | | | | | |
| **I Can Statement(s):**   |  | | --- | | * I can multiply decimals using a calculator. * I can identify the relationship between multiplication and division. | | | | | | |
| **Activating Strategy/Hook:** Teacher will have students play Around the World with a mixture of multiplication and division facts. | | | | | |
| **Teacher Directed**: (Due to the brief lesson for multiplying decimals, another lesson has been added to this day)  ***Lesson1***:Teacher will model multiplying decimals using the calculator. Teacher may use problems 9-12 on page 176 for examples to model.  ***Lesson 2***: Now that you have had practice multiplying decimals, we are going to look into the relationship between multiplication and division. Allow students to brainstorm how they think these two concepts are related and write ideas on the board. Teacher will explain that since multiplication and division are inverse operations, you can check your answer to a division problem by using multiplication. Example: 851/23=37 and 37 x 23 = 851 | | | | | |
| **Guided Practice:**  ***Lesson 1***:Teacher will work with students and complete problems 1-6 page 176 using a calculator. Upon completion, students will discuss with their table group members about the answers to problems 7 and 8.  ***Lesson 2***: Teacher will give each student an equation on an index card. (Use Inverse Activity for sample equations) Students will choose 2 statements to describe their appropriate equation. Choose from the following statements that will posted on the board.   1. My factors are \_\_\_\_\_ and \_\_\_\_\_. 2. My product is \_\_\_\_\_ 3. My dividend is \_\_\_\_\_. 2. My quotient is \_\_\_\_\_. They will write these on the back of their index cards.   Students will move around the room sharing clues in order to find their inverse partner. Once all pairs have been matched, they will read aloud their inverse matches. | | | | | |
| **Independent Practice:**  ***Lesson 1*:**Have students complete 13-28 odd problems only. Students will only multiply and not estimate the products first and will use a calculator  ***Lesson 2:*** Students will complete the Inverse activity. (see attached) | | | | | |
| **Closing/Summarizing Strategy:** In math journals, have students explain and illustrate, or give an example of the relationship between division and multiplication. | | | | | |
| **Differentiation Strategies** | | | | | | |
| **Extension** | | | **Intervention** | | | **Language Development** |
| * Teacher will explain to students that when multiplying decimals you will simply multiply as you would whole numbers and then once you have your product you will count the decimal places in your factors move this many places in your product. (see steps in example at the top of student text page 177) 1.7 x 1.5 = 2.55. | | | * Use fact family arrays to reinforce multiplication/division relationship | | |  |
| **Assessment(s):** | | | | | | |
| **Teacher Reflection:** (Next steps?) | | | | | | |